MODEL 70
SERIAL INTERFACE PROBE
(For use with the Model 532 Intelligent Logic Analyzer)

Applications:
Stimulation and/or analysis of RS-232, CCITT V.24, and 20 mA current loop interfaces. Identifies communication problems such as protocol errors, wiring incompatibilities, line noise, and intermittents.

The Model 70 Serial Interface Probe converts the Model 532 Intelligent Logic State Analyzer into a powerful tool for testing asynchronous RS-232, CCITT V.24, and 20 mA current loop interfaces.

The Model 70 is plugged into the Model 532's A channel input port. If desired, the B port can be connected to monitor 16 channels of related parallel information.

The Model 70 can simultaneously receive and transmit data as shown in the block diagram (over). To support the RECEIVE mode, all that is required is a standard Model 532. The user can then trigger on any character and store a 250-character se-

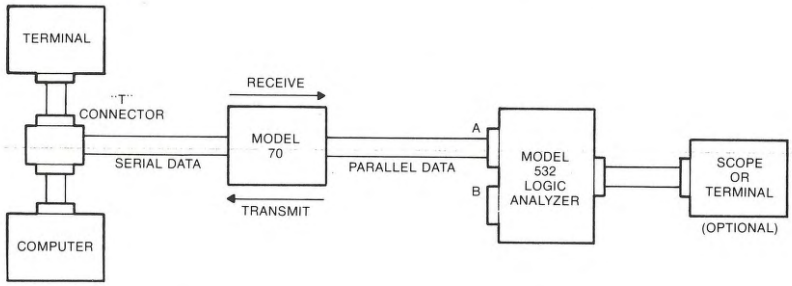
PARATRONICS INC.

quence along with the associated handshaking signals. The Model 532's powerful triggering modes allow triggering and data collection on either the occurrence or *nonoccurrence* of the expected sequence. The resulting data can be displayed on the Model 532's readouts in hexadecimal, or on an optional oscilloscope or terminal in hex or binary.

For the TRANSMIT mode, the Model 70 software option is required. This software resides in the Model 532's User's Program Memory Board and permits the Model 70 to send "canned" tests to a terminal or other serial device. The software also allows hex entry of custom messages of up to 256 characters directly from the Model 532's keyboard. Canned test patterns are contained in RAM or PROM on the Auxiliary Memory Board. Alternatively, the Auxiliary Memory Board can be used to program a received character sequence into RAM or PROM and then transmit it back to the terminal, once or repetitively.

Both TRANSMIT and RECEIVE modes operate in full-duplex. The user can select stop bits, parity, character lengths from 5 to 8 bits, and data rates from 50 to 19.2 Kbaud. The Model 70 also includes a set of LEDs for real-time monitoring of CTS, DSR, RTS, CD, and DTR.

MODEL 70 SERIAL INTERFACE PROBE TYPICAL APPLICATION



Specifications

OPERATION: Asynchronous, full-duplex.

SWITCH-SELECTED PARAMETERS:

Baud Rates	50, 75, 110, 134.5, 150, 200, 300, 600, 1200, 2400, 4800, 9600, 19.2 Kbaud, or EXTERNAL. Internal baud rates are crystal-controlled.
Character Lengths	5, 6, 7, or 8 bits.
Parity	Odd, even, or disabled.
Stop Bits	1 or 2 bits, or 1.5 bits for 5-bit words.

ANALYSIS CAPABILITIES:

(Requires Model 70 connected to A data channel of standard Model 532.)

Data Receiving	Monitors true or inverted data on RS-232 lines 2 or 3 (switch-selected). Monitors data on 20 mA current loop.
Typical Analysis Modes	Trigger on specific character; trigger on 2-character sequence; trigger on nonoccurrence of 2nd character in 2-character sequence; trigger on non-compare with reference sequence (up to 250 characters); trigger on parity or framing error. (See Model 532 Manual for additional triggering modes.)
Data Collection	Pre-trigger or post-trigger.
Data Logging	250-character tests can be recorded in RAM or 7 UV PROMs on Model 532's Auxiliary Memory Board.
Status Monitoring	RTS, CTS, DSR, CD, DTR are monitored real-time on Model 70 LEDs and collected by Model 532 along with serial data.
Data Display	Hexadecimal on Model 532's readouts; or hexadecimal or binary on optional oscilloscope or terminal.

STIMULUS CAPABILITIES:

(Requires Model 70 Software Option on User's Program Memory Board.)

Data Transmitting	Transmits true or inverted data on RS-232 lines 2 or 3 (switch-selected). Transmits on 20 mA current loop.
Data Storage	Transmits any test sequence stored in RAM or PROMs on Model 532's Auxiliary Memory Board. Transmits sequence once or repetitively.
Output Monitoring	Output data monitored on Model 70 LED.
User Tests	User-defined test sequence of up to 256 characters can be entered via the Model 532's keyboard. Additionally, much longer test sequences can be achieved with user-supplied software.

INTERFACING AND MECHANICAL:

Dimensions	5.5 x 6.5 x 1.5 in. (14.0 x 16.5 x 3.8 cm)
Model 532 Cable	36 in. (.91 m) between Model 70 and Model 532.
"T" Connector	46 in. (1.17 m) between serial "T" connector and Model 70.
Input Impedance	All RS-232 lines are greater than 3000 ohms (except ground).

PARATRONICS INC.

122 Charcot Avenue ■ San Jose ■ CA 95131
Tel: (408) 263-2252/TWX: 910-338-0201

Outside California — CALL TOLL FREE: (800) 538-9713